Zoe Krauss

University of Washington

(847) 873 4056

zkrauss@uw.edu

EDUCATION

Ph.D. University of Washington, School of Oceanography *Anticipated 2025*
Marine Geology & Geophysics; Advisor: William S.D. Wilcock

M.S. University of Washington, School of Oceanography 2021

B. A. Colorado College 2019
Physics major: Geophysics emphasis; Magna cum laude; Phi Beta Kappa

PUBLICATIONS

Krauss, Z., Ni, Y., Henderson, S., Denolle, M. (in review). Seismology in the cloud for template matching and machine-learning earthquake detection.

Krauss, Z., Wilcock, W. S., Heesemann, M., Schlesinger, A., Kukovica, J., & Farrugia, J. J. (2023). A Long-Term Earthquake Catalog for the Endeavour Segment: Constraints on the Extensional Cycle and Evidence for Hydrothermal Venting Supported by Propagating Rifts. *Journal of Geophysical Research: Solid Earth*, *128*(2), e2022JB025662.

Krauss, Z., & Menke, W. (2020). The Northern Gulf Anomaly: P-and S-wave travel time delays illuminate a strong thermal feature beneath the Northern Gulf of Mexico. *Earth and Planetary Science Letters*, *534*, 116102.

Almendros, J., **et al.** (2020). BRAVOSEIS: Geophysical investigation of rifting and volcanism in the Bransfield strait, Antarctica. *Journal of South American Earth Sciences* 104: 102834.

Borella, J., Quigley, M., **Krauss, Z.,** Lincoln, K., Attanayake, J., Stamp, L., Lanman, H., Levine, S., Hampton, S. & Gravley, D. (2019). Geologic and geomorphic controls on rockfall hazard: how well do past rockfalls predict future distributions?. *Natural Hazards and Earth System Sciences*, *19*(10), 2249-2280.

WHITE PAPERS

Krauss, Z., Eilon, Z., Parnell-Turner, R., Janiszewski, H., Worthington, L., Kidiwela, M., & Brunsvik., B. (2021) Call to expand ocean bottom seismograph (OBS) facilities and instrument pool for ambitious Rift2Ridge science*. 2021 Rift2Ridge Workshop.*

SEMINAR TALKS

Long-term seismic data unlocks the story of a mid-ocean ridge. Ocean Networks Canada Lunch and Learn, general audience. (Invited, 2023)

Long-term and real-time seismic monitoring of a mid-ocean ridge. Pacific Geoscience Center-University of Victoria Seminar. (Invited, 2023)

Machine-learning-based detection of offshore earthquakes. Data Science Seminar, University of Washington. Recording available on YouTube. (2022)

Building and interpreting an earthquake catalog for the Endeavour segment. Seismolunch Seminar and the Marine Geology and Geophysics Seminar, University of Washington, virtual. (2021)

Deep structure of the Northern Gulf of Mexico from Seismic Data. USGS Menlo Park and Stanford Reading Group, virtual. (Invited, 2021)

CONFERENCE PRESENTATIONS

SSA Annual Meeting, San Juan, PR (poster) 2023
Constructing Cloud Resources for the Individual Researcher From the Ground Up: An Example of Earthquake Detection in the Cloud

AGU Fall Meeting, Chicago, IL (poster) 2022
Investigating microearthquake multiplets using ocean bottom seismometers in a mid-ocean ridge hydrothermal field

NDSEG Fellows Conference, Boston, MA (poster and talk) 2022
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SSA Annual Meeting, Bellevue, WA (poster) 2022
Long-term Earthquake Catalog for the Endeavour Segment of the Juan De Fuca Ridge Highlights the Influence of Propagating Rifts on Hydrothermal Venting

AGU Fall Meeting, virtual (oral) 2021
Long-term earthquake patterns at the Endeavour Segment, Juan de Fuca Ridge

Rift2Ridge Workshop, virtual (lightning talk) 2021
Lessons from multiple decades of observations on the Endeavour Segment

Marine Seismology Symposium, virtual (live short talk) 2021
Building a Multidecadal Microearthquake Catalog for the Endeavour Segment of the Juan de Fuca Ridge

AWARDS

NDSEG Conference Best Presentation Award 2022
AGU Outstanding Student Presentation Award (OSPA) 2021
National Defense Science and Engineering Fellowship (NDSEG) 2020
NSF GRFP Fellowship 2020
Declined in favor of the NDSEG
ARCS Fellowship, University of Washington 2019
NSF GRFP Honorable Mention 2019
Association of Women Geoscientists Outstanding Student Award 2019
David and Karen Smith Cowperthwaite Award for Excellence in Physics 2019
Awarded by the Colorado College Physics Department

COMPUTATIONAL EXPERIENCE

Proficient in Python and Matlab
Experience with cloud computing (Azure), Git, Linux systems

& SUPPORT

University of Washington eScience Cloud ReproHackWeek 2022
Chosen to work alongside Microsoft Azure cloud computing experts to build…

University of Washington Azure Cloud Support 2022
$20,000 of Azure cloud computing credits to use towards the creation of earthquake catalogs using machine learning

University of Washington eScience Incubator Program 2022
Accepted to work one-on-one with a professional data scientist for one quarter to create a machine-learning-based earthquake catalog curation workflow using cloud computing resources

ADDITIONAL ATTENDED MEETINGS	USGS Cascadia Subduction Zone Meeting 2023 SZ4D Community Meeting USGS Cascadia Subduction Zone Meeting 2021
TEACHING AND MENTORSHIP	Mentoring for OceanHackWeek TA-ship for OCEAN 201
FIELD EXPERIENCE	Axial cruise – missed due to COVID DAS deployment Antarctica cruise Field camp, NZ